

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-244166
(43)Date of publication of application : 14.09.1998

(51)Int.CI. B01J 35/02
A61L 9/01
B01J 21/06
B01J 37/02
C02F 1/28

(21)Application number : 09-063867 (71)Applicant : AGENCY OF IND SCIENCE &

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(22)Date of filing : 03.03.1997

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(54) ENVIRONMENT CLEANING MATERIAL AND ITS PRODUCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To effectively and safely carry out the cleaning of environment such as the removal of a malodor, the decomposition and removal of a harmful material or contaminant in air or the treatment of waste water by coating the surface of a substrate whose surface is made of titanium dioxide with a porous calcium phosphate film.

SOLUTION: Water and nitric acid are added to titanium tetraisopropoxide to prepare a transparent titanium dioxide sol and granular alumina as a carrier is dip-coated with the sol and fired at 550° C. These processes are repeated three times to form a substrate surface-coated with a titanium dioxide film. The surface of the substrate is then coated with a porous calcium phosphate film. The resultant environment cleaning material enables the cleaning of environment such as the removal of a malodor, the decomposition and removal of a harmful material or contaminant in air, the treatment of waste water, the purification of water or antibacterial and antimold treatment in an effective, profitable and safe manner.

LEGAL STATUS

[Date of request for examination] 03.03.1997

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 3275032

[Date of registration] 08.02.2002

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

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